

circumstances, is known to belong to the best period of Greek art, and is, in fact, coeval, or nearly so, with the Parthenon. Notwithstanding, however, the perfection of its masonry, it retains all the constructive peculiarities of the preceding examples. The opening is roofed, if I may use the expression, by a horizontal architrave, and a horizontal arch placed over it to discharge the superincumbent weight, as in the tomb above quoted, and the well known Gate of Lions, at Mycenæ. One, however, of its most singular peculiarities is, that on the inside the discharging arch is semicircular, though constructed horizontally, and of the same course of stones as the outer or pointed arch, showing, I think, evidently, that though the architects used the horizontal construction, they could not be ignorant of the principles of the radiating arch, for nothing can be more clumsy and unscientific than an unbroken circular form and horizontal construction, and I am convinced it never would have been adopted in this instance, but from its familiarity rendering it beautiful in the eyes of the architects.

These examples are, I believe, sufficient to explain all the peculiarities of this mode of construction; though, if it were worth while, their number might be multiplied to almost any extent, for they exist not only in Asia, but in Italy and Greece, and indeed in all those countries inhabited by those races whom, in my "Historical Inquiry into the True Principles of Beauty," I have called Pelægic, and they seem to have formed a substratum to all the other nations of Europe, and to most of those in Asia also.

With the appearance of Rome, however, this form entirely disappears from the countries to which her influence extended, and is universally supplanted by the circular radiating form, which, whether she invented it or not, she introduced everywhere, and left it in every country to which her dominion extended, as one of the most marked and distinguishing architectural memorials of her sway. So completely did the Roman form supplant the older Pelægic one, that I do not know of a single instance of pointed arch of any form or mode of construction during the period of her supremacy, in any of the countries to which her influence extended.

The moment, however, that her power declined, the pointed form re-appears; but it is not in Italy or Greece, where her influence had been so innate and so long felt, that the previous civilisation and races had been entirely obliterated, but in Asia, its native seat; and I am convinced it would also be found in Egypt, if we had a single building of the period; but, as none exist, we are forced to recur to the very few that remain in Syria and Western Asia for our examples.

The first of these that I shall quote is from the church of the Holy Sepulchre, built by Constantine the Great, now known as the mosque of Omar. Its arches are throughout pointed, but so timidly as to be scarcely observable at first sight, as might indeed be expected at the first revival of a long obsolete form. You will observe, also, that besides the pointed arch which looks so strange mixed with Roman details, as we here find it, it contains reminiscences of another Pelægic form, inasmuch as the architrave rests freely on the supports, relieved from the superincumbent masses by a discharging arch, as pointed out before.

This is the only specimen of an architectural building with pointed arches of the age to which I am able to refer on this occasion,—a deficiency which arises from two causes; first, the paucity of buildings of any class erected in these countries during the period that elapsed between the age of Constantine and that of Mahomet, so that whether we are looking for round or pointed arches, we would be almost equally at a loss to find examples. The church in Bethlehem, which has no pier arches at all, is the only other building I know of. In Syria and in Egypt not one specimen of any such remains; nor do I know of one in Asia Minor; and, of course, it will not do to look for pointed arches either in Italy or Greece, where the Roman influence remained paramount far beyond the limits of the period we are now speaking of. Another cause of the want of examples is, that they have not hitherto been looked for, but

wherever a pointed arch is seen it has hitherto been put down at once as belonging to a Saracenic edifice or to some other epoch; but once it is known that the pointed arch is a characteristic of the age, and antiquaries open their eyes and look for them, I am convinced many will be found. In the meanwhile I am happy to be able to quote so valuable an authority as the Baron Texier in support of my views. I need scarcely remind you that the baron was employed by the French Government for many years in exploring the countries of the East, and is now publishing the result of his researches, under the direction of the Minister of Public Instruction, and I believe, that both from his experience and his character, there is no man living more qualified to give an opinion on the subject than he is.

In speaking of the Cathedral of Am, which is built with pointed arches throughout, he says, after quoting an inscription, which proves that it was finished in the year 1010, "It results from this document, that at a time when the pointed arch was altogether unknown, and never had been used in Europe, buildings were being constructed in the pointed arch style in the centre of Armenia.

At Diarbekr there is an extremely remarkable building now converted into a mosque, which is also constructed with pointed arches. The Armenians call the building the palace of Tigranes, and there is nothing to show that it may not have served as a residence to that prince. The lower story of the palace is ornamented with columns, Roman in style, and with capitals of the Corinthian order, tolerably well executed. These columns support pointed arches. The order of the upper story is also of a very ornate Corinthian order. The friezes and cornices are executed according to the principles of Roman art of the fourth century; nevertheless the pointed arch is found everywhere mixed with the architecture as if it was currently practised in the country.

I have already spoken of the palace at Modain, the ancient Ctesiphon, a building of the sixth century, whose gigantic portal is also of pointed architecture."

The baron then proceeds to remark, "Although it is difficult to fix exactly the period of the introduction of the pointed arch into architecture, it is impossible to draw any certain conclusion regarding the date of a building from its being used in it. The question is at present far from being solved in a satisfactory manner. One thing, however, is certain, that the pointed arch is an eastern invention, and was employed in Mesopotamia long before it was known in Europe."

From the above description it is evident that the upper story at least of the mosque at Diarbekr is a building identical in age and style with the so-called mosque of Omar at Jerusalem, for the words the baron uses in speaking of it apply as correctly and graphically to the one as to the other, and if he is correct in ascribing the lower story to Tigranes we have at least three specimens on the Tigris, extending from the Christian era to the Mahometan conquest, and, though few and far between, it must be confessed, I have no doubt but that with a little industry more may easily be discovered, and the lost links in the chain thus supplied."

JAMES FERGUSON.

OSBORNE.—LIGHTNING CONDUCTORS.—

We learn that on the 8th a heavy electrical discharge fell on Her Majesty's palace at Osborne, and did some damage to the new tower now about being completed at the east end of the building. Some of the cornice was destroyed, the windows shattered, and three men struck down. The high tower and flag-staff at the west end, fitted with lightning-conductors, was unharmed. The tower which suffered, not being complete, had not any such protection, and was about 200 feet distant from the more elevated tower at the west end, and which escaped damage, thus furnishing an illustration of the advantage derived from a system of electrical conductors in disarming the thunder-storm of its terrors.

* The paper, of which this is the commencement, was read at a meeting of the Royal Institute of Architects on the 13th instant. We shall give the remainder hereafter, together with a report of the discussion which followed.

AN ATTEMPT TO EXHIBIT THE TRUE PRINCIPLES OF ARCHITECTURAL AND PICTORIAL EFFECT IN REFERENCE TO STREETS, AND TO TOWNS GENERALLY.

BEFORE proceeding to our immediate subject, it will not be amiss, briefly to remind you what is the real nature and influence of architecture generally, and its rank among the arts.

Architecture, in its largest sense, comprises a scientific and mechanical department, as well as an artistic; and they are most intimately connected; the latter arising in a great measure out of the former; but it is with the profession as a fine art that we have chiefly to do in this paper. Architecture as such is worthy of the consideration of the most exalted intellects; it has an influence from infancy upon our daily life, entwines itself with household virtues, and excites in our breasts a love of country and home. In its loftier effects, with painting and sculpture (from which it differs only in mechanism and application), it hallows and ennobles the mind, elevating it above trifling and vicious pursuits, and becomes, in the words of Fuseli, "the highest degree of education—the ultimate polish of man." For in the architectural pile, no less than in the poem, may be enshrined "undying thought." York Minster and St. Paul's Cathedral are equally exponents of mind with the volumes of Shakespeare and Milton. A piece of genuine architecture may be read, and become productive of the loftiest emotions of which the heart is capable. Erecting an edifice then, artistically, is the expressing of a sentiment, giving to stone and wood an idea, "a fixing" as Bulwer has it, "into substance the invisible." Coleridge calls a Gothic church, "a petrification of religion." Goethe terms architecture, "frozen music." Madame De Staël has the same beautiful conceit, and Lamartine in his "Mémorial of my Youth," calls St. Peter's church "an apotheosis in stone, a monumental transfiguration of the religion of Christ."

We run counter to analogy if we deny this, and suppose that the spirit of beauty embodied in the creations of the artist, is intended merely to please the eye while it continues a novelty. It is opposed to the whole economy of nature, of which art is a reproduction; "A thing of beauty," sings the poet—

Is a joy for ever:
Its loveliness increases, it can never
Pass to forgetfulness.

There is an instinctive yearning after the beautiful in the breast of every man, and the mission of the architect is, with the poet, the sculptor, and the painter, to co-operate with nature in ministering to that want.

Houses were so arranged in cities as to form regular streets, from the earliest time; frequent mention of them occurs in Scripture (the earliest in reference to Sodom in the days of Abraham), where much figurative use is made of the word. "The golden streets of the New Jerusalem" are familiar to all readers of the bible.

The streets of Babylon are the first of which we have anything like description. They are said to have been in straight lines, fifteen miles long, and at right angles to each other. The houses were detached and richly ornamented towards the streets. The streets of Athens were not remarkable for beauty; the houses were ill-constructed and mean, the lanes dark and narrow; some, as may be gathered from ancient authors, were tolerably spacious; of a few mention by name has been made, as the street of Theseus—the way which led to Eleusis,—Tripodian-street—a way near the Prytanæum,—and some others.

However erroneous the principles on which streets in various times and cities were formed, the subject was generally deemed one of importance; street magnificence having not unfrequently been an object of ambition to kings and conquerors, not only in ancient but in modern times; and so much talent and wealth have of late been expended, and are now expending, on improvements in our large towns, that an inquiry into the true principles of effect in reference to street-formation is not without importance, and cannot be altogether void of interest to the present meeting.

It has been the practice, as is well known, in the improvements alluded to, in London, Liverpool, Birkenhead, and elsewhere—in fact it is a feature of the day, to form the new streets